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| Booth Udall, PLC 1155 W Rio Salado Parkway Suite 101 Tempe, AZ 85281 | | | CHBOUKI, TAREK | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 09/895,654 | Applicant(s) TENORIO, MANOEL | |
| | Examiner TAREK CHBOUKI | Art Unit 2165 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-52 and 54-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-52, 54-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/12/2010 has been entered.

Response to Amendment

This Office action has been issued in response to amendment filed on 02/19/2010. Claims 1-28 and 53 are cancelled. Claims 29-52 and 54-56 are pending. Applicants' arguments have been carefully and respectfully considered and a new ground of rejection is made.

Response to arguments

Applicant's arguments regarding 103(a) references are moot in view of the new ground of rejection.

With respect to Applicant's arguments stating the combination of art is improper, Examiner respectfully disagrees. Examiner did provide references in an analogous art and did provide a motivation to combine those arts.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 rejected on the ground of nonstatutory double patenting over claim1 of U. S. Patent No. 7412404 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

| Instant Application 09/895654 | Patent No 7412404 |
|--|--|
| 29. (Currently Amended) An electronic commerce system, comprising: a global content directory server coupled with one or more seller databases over a network, the global content directory server providing a plurality of buyer computers access to the one or more seller databases, the global content directory server comprising: | (Currently Amended) An electronic commerce system for generating, updating, and managing multi-taxonomy environments, the system comprising: one or more sellers' databases operable to store product data for one or more 3roducts; a master global content directory coupled with the one or more sellers' databases including a |

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| <p>a storage medium stored therein a schema translation tool comprising:</p> <p>a storage medium stored therein a mapping module configured to:</p> <p>receive information regarding a source schema data and [[a]] target schema data, the source schema data and the target schemas schema data each comprising a taxonomy comprising a hierarchy of classes into which products are categorized, wherein the target schema data comprises a different taxonomy than the taxonomy of the source schema data, at least the source schema data further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes; and associate one or more source classes of the source schema data with one or more target classes of the target schema data; and</p> <p>a storage medium stored therein an ontology generation module configured to generate a product ontology for each of the target classes based on the product ontologies of the associated source classes</p> | <p>plurality of product classes organized in a hierarchy according to a first classification system, each product class categorizing a plurality of products and associated with one or more attributes of the products categorized in the product class, at least one of the product classes having one or more associated product pointers that identify one or more of the sellers' databases;</p> <p>one or more secondary content directories coupled with the master global content directory including one or more product classes organized in a hierarchy according to a second classification system that is distinct from the first classification system of the master global content directory, each product class being mapped to one or more product classes in the master global content directory and having one or more associated class pointers that identify the one or more product classes in the master global content directory to which the product class is mapped; and</p> <p>a search interface operable to:</p> <p>receive a selection of a product class of a secondary content directory from a user, the selected product class having at least one class pointer identifying at least one product class in the master global content directory; and</p> <p>communicate, in response to selection of the product class by the user, a search query to one or more of the sellers' databases to search product data stored in the sellers' databases identified by one or more of the product pointers to facilitate a commercial transaction involving one or more products</p> |
|--|--|

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the

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subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 29-36 and 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Livesay, Jeffery et al (hereinafter Livesay) US Publication No 20080126265 and Reisman, Richard (hereinafter Reisman) US Patent No. 7406436 in view of Omoigui, Nosa (hereinafter Omoigui) US Publication No. 20070081197.

As per claim 29, Livesay discloses:

An electronic commerce system, comprising:

a global content directory server (Abstract: lines 1-2 and FIG. 4, components 401 and 406) **coupled with one or more seller databases over a network, the global content directory server providing a plurality of buyer computers access to the one or more seller databases,** (Paragraphs [0088] and [0129], indicate global content directory (FIG. 4, components 401 and 406) providing the buyer access to the seller database).

the global content directory server comprising:

a storage medium stored therein a schema translation tool comprising:

a storage medium stored therein a mapping module configured to:

receive a source schema data and a target schema data,

(paragraphs [0079] and [0100], indicate the plurality of schema (XML data files)).

Livesay does not go into detail regarding the hierarchy of product within the schemas, however in an analogous art of data mapping/translating, Reisman teaches:

the source schema data and target schema data each comprising a taxonomy comprising a hierarchy of classes into which products are categorized wherein the target

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schema comprises a different taxonomy then the taxonomy of the source schema (Column 25, lines 48-65, wherein the XML files contain different item structure taxonomy).

at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes (Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria).

and associate one or more source classes of the source schema with one or more target classes of the target schema (Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file).

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman by incorporating the teaching of Reisman into the system of Livesay. One having ordinary skill in the art would have found it motivated to use the product categorization of Reisman into the system of Livesay for the purpose of leveraging XML schema when defining commerce or trade product in order to facilitate data exchange and parsing between partners.

Livesay and Reisman do not go into detail regarding storing product ontology, however in an analogous art of data mapping/translating, Omoigui teaches:

and a storage medium stored therein an ontology generation module configured to generate a product ontology for each of the target classes based on the product ontologies of the associated source classes (Paragraphs [0528]-[0529], wherein ontology mapping table is the storage of ontology association)

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman and Omoigui by incorporating the teaching of Omoigui into the system of Livesay and Reisman. One having ordinary skill in the art would have found it motivated to use the product ontology of Omoigui into the system of Livesay and

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Reisman for the purpose of capturing and storing product relationship in order to augment mapping association of the plurality of schemas.

As per claim 30, Livesay and Reiman and Omoigui teach:

The system of Claim 29, wherein the mapping module is further configured to:

receive input from at least one of the plurality of buyer computers indicating one or more source classes to be associated with one or more target classes (Paragraph [0155], wherein the input parameter links buyer to seller)(Livesay).

and associate the source classes with the target classes in response to the input from a user associated with at least one of the plurality of buyer computers (Paragraph [0155], wherein the input parameter links buyer to seller)(Livesay)

(Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

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As per claim 31, Livesay and Reiman and Omoigui teach:

The system of Claim 30, wherein the mapping module is further configured to:

generate a graphical representation of the taxonomies of the source and target schema data, the graphical representation allowing at least one of the plurality of buyer computers to graphically associate classes of the source schema with classes of the target schema

(Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file and wherein the IBM's Visual XML transformation is the mapping module)(Reiman).

and communicate the graphical representation to at least one of the plurality of buyer computers (paragraph [0161]), wherein the link is the graphical communication between buyer and seller)(Livesay).

As per claim 32, Livesay and Reiman and Omoigui teach:

The system of Claim 29, wherein the source classes are leaf classes of the source schema data (Column 6, lines 10-23, wherein the subcategory incorporates a leaf class)(Reiman)

As per claim 33, Livesay and Reiman and Omoigui teach:

The system of Claim 29, wherein the ontology generation module is further configured to generate a product ontology for a target class by determining the intersection of the product attributes included in the product ontologies of the associated source classes (Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omoigui)

As per claim 34, Livesay and Reiman and Omoigui teach:

The system of Claim 29, wherein the ontology generation module is further configured to generate a product ontology for a parent class of a plurality of target classes by determining the intersection of the product attributes included in the product ontologies of the target classes (Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omoigui)

the product ontologies of the target classes having been generated by the ontology generation module (Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omoigui)

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As per claim 35, Livesay and Reiman and Omoigui teach:

The system of Claim 29, wherein:

at least the source schema further comprises a seller ontology associated with one or more of the classes, each seller ontology comprising one or more attributes associated with one or more sellers of a product (Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria)(Reiman).

and the ontology generation module is further configured to generate a seller ontology for each of the target classes based on the seller ontologies of the associated source classes (Paragraph [0136], wherein the determining profile link with best fit criteria (ontologies) is determining association between product parameters (attributes) between seller and buyer)(Livesay).

As per claim 36, Livesay and Reiman and Omoigui teach:

The system of Claim 29, wherein:

one or more pointers identifying the one or more seller databases are associated with at least one source class (Paragraphs [0088] and [0129], indicate the database product identification linking the buyer and seller)(Livesay).

the one or more seller databases including product data associated with one or more products categorized in the source class (Paragraphs [0088] and [0129], indicate the database product identification linking the buyer and seller)(Livesay).

and the mapping module is further configured to associate the one or more pointers of the source class with one or more target classes associated with the source class

(Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

As per claim 54, Livesay discloses:

A electronic commerce system, comprising:

a global content directory server coupled with one or more seller databases over a network, (Abstract: lines 1-2 and FIG. 4, components 401 and 406)

the global content directory server providing a plurality of buyer computers access to the one or more seller databases (Paragraphs [0088] and [0129], indicate global content directory (FIG. 4, components 401 and 406) providing the buyer access to the seller database),

the global content directory server comprising:

a storage medium stored therein a schema translation tool comprising:

a storage medium stored therein a mapping configured to:

receive a source schema data and [[a]] target schema data,

(paragraphs [0079] and [0100], indicate the plurality of schema (XML data files)),

communicate the graphical representation to at least one of the plurality of buyer computers (Paragraphs [0088] and [0129], indicate the database product identification linking the buyer and seller);

receive input from at least one of the plurality of buyer computers indicating one or more source classes of the source schema data to be associated with one or more target classes of the target schema data (paragraph [0161], wherein the link is the graphical communication between buyer and seller);

associate one or more source classes with one or more target classes in response to the input from at least one of the plurality of buyer computers (paragraph [0161], wherein the link is the graphical communication between buyer and seller);

at least the source schema data further comprising one or more pointers identifying one or more seller databases and associated with one or more classes, the one or more seller databases including product data associated with one or more products categorized in the

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classes (paragraph [0161], wherein the link is the graphical communication between buyer and seller);

Livesay does not go into detail regarding the hierarchy of product within the schemas, however in an analogous art of data mapping/translating, Reisman teaches:

and associate the pointers of the source classes with one or more target classes associated with the source class (Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file).

the source schema data and the target schemas schema data each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized,
(Column 25, lines 48-65, wherein the XML files contain item structure taxonomy).

wherein the target schema data comprises a different taxonomy then the taxonomy of the source schema data,

(Column 25, lines 48-65, wherein the XML files contain different item structure taxonomy)

at least the source schema data further comprising a product ontology associated with one or more of the classes,

(Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria).

each product ontology comprising one or more product attributes,

(Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria).

generate a graphical representation of the taxonomies of the source schema data and target schemas schema data, the graphical representation allowing at least one of a plurality of buyer computers to graphically associate the classes of the source schema data with classes of the target schema data;

(Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file and wherein the IBM's Visual XML transformation is the mapping module)

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman by incorporating the teaching of Reisman into the system of Livesay. One having ordinary skill in the art would have found it motivated to use the product categorization of Reisman into the system of Livesay for the purpose of leveraging XML schema when defining commerce or trade product in order to facilitate data exchange and parsing between partners.

Livesay and Reisman do not go into detail regarding storing product ontology, however in an analogous art of data mapping/translating, Omoigui teaches:

a storage medium stored therein an ontology generation module configured to generate a product ontology for each of the target classes based on the intersection of the product attributes included in the product ontologies of the associated source classes

(Paragraphs [0528]-[0529], wherein ontology mapping table is the storage of ontology association)

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman and Omoigui by incorporating the teaching of Omoigui into the system of Livesay and Reisman. One having ordinary skill in the art would have found it motivated to use the product ontology of Omoigui into the system of Livesay and Reisman for the purpose of capturing and storing product relationship in order to augment mapping association of the plurality of schemas.

As per claim 55, Livesay discloses:

A method for translating between schemas, comprising:

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receiving, by a server, information regarding a source schema data and [[a]] target schema data (paragraphs [0079] and [0100], indicate the plurality of schema (XML data files)),

at least the source schema data further comprising one or more pointers identifying one or more seller databases and associated with one or more classes, the one or more seller databases including product data associated with one or more products categorized in the classes (paragraph [0161], wherein the link is the graphical communication between buyer and seller);

communicating, by the server, the graphical representation to at least one of the plurality of buyer computers;

(paragraph [0161], wherein the link is the graphical communication between buyer and seller);

Livesay does not go into detail regarding product taxonomy/ontology of schemas data, however in an analogous art of data mapping/translating, Reisman teaches:

the source schema data and the target schemas schema data each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized,

(Column 25, lines 48-65, wherein the XML files contain different item structure taxonomy).

at least the source schema data further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes,

(Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria).
generating, by the server, a graphical representation of the taxonomies of the source schema data and the target schemas schema data, the graphical representation allowing at least one of a plurality of buyer computers to graphically associate the classes of the source schema data with classes of the target schema data;

(Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file and wherein the IBM's Visual XML transformation is the mapping module)

receiving, by the server, input from at least one of the plurality of buyer computers indicating one or more source classes of the source schema data to be associated with one or more target classes of the target schema data;

(column 2, lines 3-8Column 25, lines 48-65, wherein the schema conversion/mapping is the association of the plurality of schemas).

associating, by the server, one or more source classes with one or more target classes in response to the input from at least one of the plurality of buyer computers;

(column 2, lines 3-8Column 25, lines 48-65, wherein the schema conversion/mapping is the association of the plurality of schemas).

associating, by the server, the pointers of the source classes with one or more target classes associated with the source class;

(column 2, lines 3-8Column 25, lines 48-65, wherein the schema conversion/mapping is the association of the plurality of schemas).

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman by incorporating the teaching of Reisman into the system of Livesay. One having ordinary skill in the art would have found it motivated to use the product categorization of Reisman into the system of Livesay for the purpose of leveraging XML schema when defining commerce or trade product in order to facilitate data exchange and parsing between partners.

Livesay and Reisman do not go into detail regarding product ontology intersection, however in an analogous art of data mapping/translating, Omoigui teaches:

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and generating, by the server, a product ontology for each of the target classes based on the intersection of the product attributes included in the product ontologies of the associated source classes

(Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omoigui)

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman and Omoigui by incorporating the teaching of Omoigui into the system of Livesay and Reisman. One having ordinary skill in the art would have found it motivated to use the product ontology of Omoigui into the system of Livesay and Reisman for the purpose of capturing and storing product relationship in order to augment mapping association of the plurality of schemas.

As per claim 56, Livesay discloses:

A computer-readable medium embodied with software for translating between schemas, the software when executed using one or more computers is configured to:

receive information regarding a source schema data and [[a]] target schema data,

(paragraphs [0079] and [0100], indicate the plurality of schema (XML data files)),

at least the source schema data further comprising one or more pointers identifying one or more seller databases and associated with one or more classes, the one or more seller databases including product data associated with one or more products categorized in the classes (paragraph [0161], wherein the link is the graphical communication between buyer and seller);

communicate the graphical representation to at least one of the plurality of buyer computers;

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(paragraph [0161], wherein the link is the graphical communication between buyer and seller);

Livesay does not go into detail regarding product taxonomy/ontology of schemas data, however in an analogous art of data mapping/translating, Reisman teaches

the source schema data and the target schemas schema data each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized,

(Column 25, lines 48-65, wherein the XML files contain different item structure taxonomy).

at least the source schema data further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes,

(Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria).
generate a graphical representation of the taxonomies of the source schema data and the target schemas schema data, the graphical representation allowing at least one of a plurality of buyer computers to graphically associate the classes of the source schema data with classes of the target schema data;

(Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file and wherein the IBM's Visual XML transformation is the mapping module)

receive input from at least one of the plurality of buyer computers indicating one or more source classes of the source schema data to be associated with one or more target classes of the target schema data;

(column 2, lines 3-8Column 25, lines 48-65, wherein the schema conversion/mapping is the association of the plurality of schemas).

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associate one or more source classes with one or more target classes in response to the input from at least one of the plurality of buyer computers;

(column 2, lines 3-8Column 25, lines 48-65, wherein the schema conversion/mapping is the association of the plurality of schemas).

associate the pointers of the source classes with one or more target classes associated with the source class;

(column 2, lines 3-8Column 25, lines 48-65, wherein the schema conversion/mapping is the association of the plurality of schemas).

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman by incorporating the teaching of Reisman into the system of Livesay. One having ordinary skill in the art would have found it motivated to use the product categorization of Reisman into the system of Livesay for the purpose of leveraging XML schema when defining commerce or trade product in order to facilitate data exchange and parsing between partners.

Livesay and Reisman do not go into detail regarding product ontology intersection, however in an analogous art of data mapping/translating, Omoigui teaches:

and generate a product ontology for each of the target classes based on the intersection of the product attributes included in the product ontologies of the associated source classes

(Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omoigui)

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Livesay and Reisman and Omoigui by incorporating the teaching of Omoigui into the system of Livesay and Reisman. One having ordinary skill in the art would have found it motivated to use the product ontology of Omoigui into the system of Livesay and

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Reisman for the purpose of capturing and storing product relationship in order to augment mapping association of the plurality of schemas.

2. Claims 37-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reisman, Richard (hereinafter Reisman) US Patent No. 7406436 in view of Omoigui, Nosa (hereinafter Omoigui) US Publication No. 20070081197.

As per claim 37, Reisman discloses:

A computer-implemented method of translating schema data, comprising:

receiving, by a server, a source schema data and a target schema data, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized (Column 25, lines 48-65, wherein the XML files contain item structure taxonomy).

wherein the target schema data comprises a different taxonomy than the taxonomy of the source schema data (Column 25, lines 48-65, wherein the XML files contain different item structure taxonomy),

at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes (Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria).

associating, by the server, one or more source classes of the source schema with one or more target classes of the target schema;

(Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file).

Reisman does not go into detail regarding storing/reporting product ontology, however in an analogous art of data mapping/translating, Omoigui teaches:

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and generating, by the server, a product ontology for each of the target classes based on the product ontologies of the associated source classes

(Paragraphs [0528]-[0529], wherein ontology mapping table is the storage of ontology association)

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Reisman and Omoigui by incorporating the teaching of Omoigui into the system of Reisman. One having ordinary skill in the art would have found it motivated to use the product ontology of Omoigui into the system of Reisman for the purpose of capturing and storing/reporting product relationship in order to augment mapping association of the plurality of schemas.

As per claim 38, Reisman and Omoigui teach:

The method of Claim 37, further comprising:

receiving input from at least one of a plurality of buyer computers indicating one or more source classes to be associated with one or more target classes (Column 2, lines 3-8, Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

and associating the source classes with the target classes in response to the input from at least one of the plurality of buyer computers (Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

As per claim 39, Reisman and Omoigui teach:

The method of Claim 38, further comprising:

generating a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing at least one of the plurality of buyer computers to graphically associate classes of the source schema with classes of the target schema

(Column 25, lines 48-65, wherein the IBM Visual XML is the graphical tool)(Reiman).

and communicating the graphical representation to at least one of the plurality of buyer computers (Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

As per claim 40, Reisman and Omoigui teach:

The method of Claim 37, wherein the source classes are leaf classes of the source schema.

(Column 6, lines 10-23, wherein the subcategory incorporates a leaf class)(Reiman)

As per claim 41, Reisman and Omoigui teach:

The method of Claim 37, further comprising generating a product ontology for a target class by determining the intersection of the product attributes included in the product ontologies of the associated source classes (Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omoigui)

As per claim 42, Reisman and Omoigui teach:

The method of Claim 37, further comprising generating a product ontology for a parent class of a plurality of target classes by determining the intersection of the product attributes included in the product ontologies of the target classes (Paragraph [0602], wherein

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the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omiogui)

As per claim 43, Reisman and Omoigui teach:

The method of Claim 37, wherein:

at least the source schema further comprises a seller ontology associated with one or more of the classes, each seller ontology comprising one or more attributes associated with one or more sellers of a product (Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

and the method further comprises generating a seller ontology for each of the target classes based on the seller ontologies of the associated source classes.

(Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

As per claim 44, Reisman and Omoigui teach:

The method of Claim 37, wherein:

one or more pointers identifying the one or more seller databases are associated with at least one source class (Column 2, lines 3-8 and column 4, lines 19-28 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

the one or more seller databases including product data associated with one or more products categorized in the source class (Column 2, lines 3-8 and column 4, lines 19-28 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

and the method further comprises associating the pointers of the source class with one or more target classes associated with the source class (Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

As per claim 45, Riesman discloses:

A computer-readable medium embodied with software for translating between schemas, the software when executed using one or more computers is configured to:

receive a source schema data and a target schema data, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized (Column 25, lines 48-65, wherein the XML files contain item structure taxonomy).

wherein the target schema data comprises a different taxonomy then the taxonomy of the source schema data (Column 25, lines 48-65, wherein the XML files contain different item structure taxonomy).

at least the source schema data further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes;

(Column 25, lines 48-65, wherein the item attributes variation is the ontology criteria).

associate one or more source classes of the source schema data with one or more target classes of the target schema data;

(Column 25, lines 48-65, wherein the XML files contain different item structure taxonomy).

Reisman does not go into detail regarding storing/reporting product ontology, however in an analogous art of data mapping/translating, Omoigui teaches:

and generate a product ontology for each of the target classes based on the product ontologies of the associated source classes (Paragraphs [0528]-[0529], wherein ontology mapping table is the storage of ontology association)

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to combine Reisman and Omoigui by incorporating the teaching of Omoigui into the system of Reisman. One having ordinary skill in the art would have found it motivated to use the product ontology of Omoigui into the system of Reisman for the purpose of capturing and storing/reporting product relationship in order to augment mapping association of the plurality of schemas.

As per claim 46, Reisman and Omoigui teach:

The computer-readable medium of Claim 45, wherein the software is further configured to:
receive input from at least one of a plurality of buyer computers indicating one or more source classes to be associated with one or more target classes;

(Column 2, lines 3-8, Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

and associate the source classes with the target classes in response to the input from at least one of the plurality of buyer computers (Column 2, lines 3-8, Column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

As per claim 47, Reisman and Omoigui teach:

The computer-readable medium of Claim 46, wherein the software is further configured to:

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generate a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing at least one of the plurality of buyer computers to graphically associate classes of the source schema with classes of the target schema;

(Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file and wherein the IBM's Visual XML transformation is the mapping module)(Reiman).

and communicate the graphical representation to at least one of the plurality of buyer computers.

(Column 2, lines 3-8 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file and wherein the IBM's Visual XML transformation is the mapping module)(Reiman).

As per claim 48, Reisman and Omoigui teach:

The computer-readable medium of Claim 45, wherein the source classes are leaf classes of the source schema. (Column 6, lines 10-23, wherein the subcategory incorporates a leaf class)(Reiman)

As per claim 49, Reisman and Omoigui teach:

The computer-readable medium of Claim 45, wherein the software is further configured to generate a product ontology for a target class by determining the intersection of the product attributes included in the product ontologies of the associated source classes.

(Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omiogui)

As per claim 50, Reisman and Omoigui teach:

The computer-readable medium of Claim 45, wherein the software is further configured to generate a product ontology for a parent class of a plurality of target classes by determining the intersection of the product attributes included in the product ontologies of the target classes.

(Paragraph [0602], wherein the Semantic relevance is based on intersection of categories which highest ontology-based semantic)(Omiogui)

As per claim 51, Reisman and Omoigui teach:

The computer-readable medium of Claim 45, wherein:

at least the source schema further comprises a seller ontology associated with one or more of the classes, each seller ontology comprising one or more attributes associated with one or more sellers of a product (Column 2, lines 3-8 and column 25, lines 48-65, wherein the item attributes variation is the ontology criteria)(Reisman).

and the software is further configured to generate a seller ontology for each of the target classes based on the seller ontologies of the associated source classes (Column 2, lines 3-8 and column 25, lines 48-65, wherein the item attributes variation is the ontology criteria)(Reisman).

As per claim 52, Reisman and Omoigui teach:

The computer-readable medium of Claim 45, wherein:

one or more pointers identifying one or more seller databases are associated with at least one source class ((Column 2, lines 3-8 and column 4, lines 19-28 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

the seller databases including product data associated with one or more products categorized in the source class (Column 2, lines 3-8 and column 4, lines 19-28 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

And the software is further configured to associate the pointers of the source class with one or more target classes associated with the source class (Column 2, lines 3-8 and column 4, lines 19-28 and column 25, lines 48-65, wherein the item conversion / matching is the association of items (classes) within the XML file)(Reiman).

Conclusion

For the prior art made of record and not relied upon is considered pertinent to applicant's disclosure, please refer to the Notice of Reference form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarek Chbouki whose telephone number is 571-2703154. The examiner can normally be reached on Mon-Fri 7:30 am to 5:00 pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neveen Abel-Jalil can be reached at 571-2724074. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. C./

Examiner, Art Unit 2165

03/16/2010

/Neveen Abel-Jalil/

Supervisory Patent Examiner, Art Unit 2165